REMARKS

Claims 11-23 were pending prior to entering this amendment. Claims 1-10 and 24-28 are withdrawn from consideration. Claims 11-23 stand rejected under §102(b) as being anticipated by any one of the Gabriel, Brumlik, and Ochrymowich references. New claims 29-30 have been added. At least in light of the above amendments and the foregoing remarks, issuance of the allowed claims is respectfully requested.

Advantages of the Current Invention as Claimed

The current invention claims a system for quickly building geometric structures from struts and hub-like attachment points. End-tabs on the ends of the struts have flexible and planar properties.

Flexibility is important as this "provides spatial error compensation by virtue of its ability to flex, stretch, and contract." (specification, paragraph [0054]) That is, flexible sections allow the struts to be bent from the hubs in a variety of directions depending upon the geometric shape desired and that this flexibility is self-correcting depending upon what other hubs it is connected to—in other words, the object forms into a natural shape dependent upon the connections made.

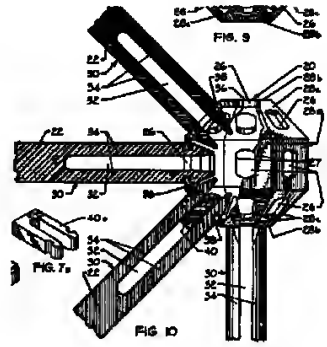
The planar—e.g. flat, thin—nature of the end-tabs allow the end tabs of multiple struts to be stacked flatly upon each other so that there is little interference with the final shape of the geometric form constructed using the elements of the invention. In the preferred embodiment shown, a post passes through holes formed in a plurality of stacked end-tabs—akin to keys on a key ring being face-to-face against adjacent keys and rotatable to any position. In the invention, the end tabs are then allowed to rotate around the post to point in any radial direction. The flexible nature of the connector section to the strut then allows the strut to point orthogonally (and not just perpendicularly) from the post surface. In other words, such properties allow nearly infinitely configurable geometric forms to be quickly assembled.

Differences between the Current Invention as Claimed and the Prior Art of Record

Claim 11 includes elements not taught in either the Gabriel, Chen, Brumlik, or Ochrymowich references.

GABRIEL/CHEN –

Claim 11 has been rejected under 35 U.S.C. § 102(b) as being anticipated by either U.S. Patent No. 4,129,975 (Gabriel) or U.S. Patent Publication No. 2002/0110411 (Chen). Gabriel/Chen, however, do not teach elements of claim 11, including: (a) planar ends of the struts, (b) flexible sections coupling the shaft to the planar ends, and (c) coupling elements adapted to couple planar ends of different struts in face-to-face relation.



The Examiner does not go into detail to explain which portions of Gabriel or Chen correspond to elements of the claims, but does make reference to the clip fasteners 30.

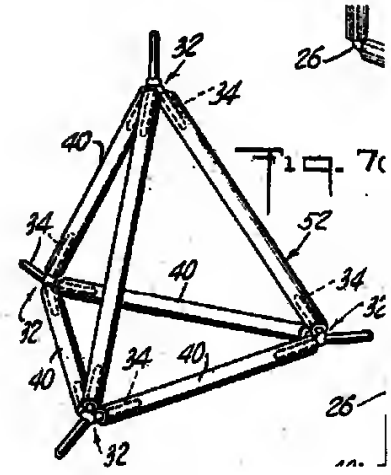
Gabriel is shown right and includes multifaceted joint elements 20 with openings 26 passing through each of the facets 28. Rigid clips couple between struts and the joint elements by engaging notches 38 within the openings 26 "at right angles" (Gabriel, col. 3, line 47) to "lock the clips into place" (*Id.*, lines 50-51). (*Chen is very similar with rods threading into holes of the multifaceted structure*)

These clips are rigid, not flexible, and have a 3-D profile that makes them unsuitable for attaching in face-to-face relation as noted in claim 11. Planar surfaces are shown and described within the current specification as flat; and commonly understood definitions of the term "planar" also imply flat/thin—features that are not fulfilled by Gabriel. As the facets of the joining member 20 angle away from adjacent facets, the attached clips angle away from adjacent clips.

Removal of this rejection is respectfully requested in view of the differences noted above.

BRUMLIK –

Claims 11-23 have been rejected under 35 U.S.C. 102(b) as being anticipated by 3,333,349 (Brumlik). Like Gabriel, Brumlik does not teach elements of claim 11, including: (a) planar ends of the struts, (b) flexible sections coupling the shaft to the planar ends, and (c) coupling elements adapted to couple planar ends of different struts in face-to-face relation.

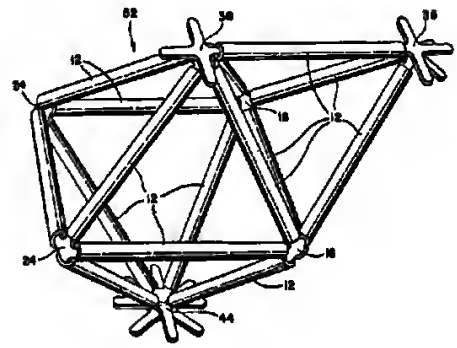


Again, the Examiner has not pointed out which features of

Brumlik correspond to which elements of the claims.

Brumik teaches a hub and spoke design used to simulate molecular structures. Each arm of the multi-armed couplings—such as 4-part coupling 32 in the Brumik drawing above-right—slides into a hollow interior of an elastomeric tube. The arms may be bent into any angle, and the tubes flex to show bent bonds of a strained molecule. However, the ends of the tubes are not planar, and are not face-to-face as with the present invention. In Brumik, the hubs are flexible rather than the parts of the struts as in the claims—and even then not "resiliently" so as once shaped the hub section 34 maintains that angle and does not snap back.

As elements of the broadest claims are missing from the Brumik reference, rejection under §102(b) is improper and correction is requested.



OCHRYMOWICH –

Claims 11-23 have been rejected under 35 U.S.C. § 102(b) as being anticipated by or in the alternative, under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 3,830,011 (Ochrymowich). Like Gabriel and Brumlik, Ochymowich does not teach elements of claim 11, including: (a) planar ends of the struts, (b) flexible sections coupling the shaft to the planar ends, and (c) coupling elements adapted to couple planar ends of different struts in face-to-face relation.

Ochyrmowich teaches a hub and spoke structure much like Brumlik where the hub very much determines the departure angle of the spoke. Unlike Brumlik where the metal posts of the hub are bendable to a desired angle, the thermoplastic sheet plastic hub arms of Ochyrmowich are sufficiently thin so that they bend upward or downward to complete the connection at the proper angle.

Ochyrmowich differs from the invention as claimed in that the struts of Ochyrmowich do not themselves have planar ends for face-to-face orientation. First, the only flat portions are on the Ochyrmowich hubs. Second, the arms of the Ochyrmowich hubs are not in face-to-face orientation but instead the faces of the arms are not, and can never be, adjacent to one another so that they are in face-to-face orientation. Furthermore, the arms of the Ochyrmowich hubs are pointed in a relatively fixed direction and cannot rotate about an axis of the hub—see, e.g., claims 13 and 29.

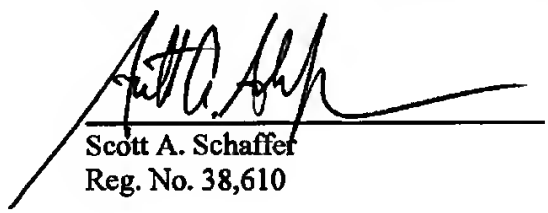
The present invention as claimed allows several advantages over Ochyrmowich. First, the number of struts coming off of a connection point/hub need not be predetermined—one could simply place more of the planar tab-ends on the pin connector. In contrast, Ochyrmowich requires that the proper hub with the proper number of arms be selected in advance. Second, two struts can be connected between the same two connection points/hubs. In contrast, Ochyrmowich does not allow such connections given the predefined structure of hub arms.

Finally, and because of functional advantages of placing the planar ends of the struts as in the present invention rather than the hubs as in Ochyrmowich, there is not an equivalence to the structures, nor would the teaching of Ochyrmowich motivate one to place the planar ends on the struts.

In summary, the claims as pending cite to elements not found within the prior art of record and thus avoid any rejection under §102(b) and 103(a). For the foregoing reasons, reconsideration and allowance of claims 11-23 of the application and new claims 29-30 is requested. The Examiner is encouraged to telephone the undersigned at (503) 222-3613 if it appears that an interview would be helpful in advancing the case.

Respectfully submitted,

MARGER JOHNSON & McCOLLOM, P.C.



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